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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,986	12/28/2000	Alexander Steinbuchel	Bayer 9998.2-HCL	1415
27386	7590	02/22/2005	EXAMINER	
NORRIS, MCLAUGHLIN & MARCUS, P.A. 875 THIRD AVE 18TH FLOOR NEW YORK, NY 10022			RAMIREZ, DELIA M	
			ART UNIT	PAPER NUMBER
			1652	

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/750,986

Applicant(s)

STEINBUCHER ET AL.

Examiner

Delia M. Ramirez

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
4a) Of the above claim(s) 3-6, 9-12 and 15 is/are withdrawn from consideration.
5) ☒ Claim(s) 1 and 7 is/are allowed.
6) ☒ Claim(s) 2, 13 and 14 is/are rejected.
7) ☒ Claim(s) 8 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 08/976,063.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: DSM.7 Printouts

DETAILED ACTION

Status of the Application

Claims 1-15 are pending.

Applicant's amendment of claims 1-13, addition of claims 14-15, and amendments to the specification, in a communication filed on 12/1/2004 are acknowledged.

Applicant's petition to withdraw the finality of the election/restriction requirement is acknowledged. The petition has been granted in part as follows: Group XI will be rejoined with Group XVI, Group XII will be rejoined with Group XVII, Group XIII will be rejoined with Group XVIII, Group XIV will be rejoined with Group XIX, and Group XV will be rejoined with Group XX. Therefore, based on the claims as originally filed, the restriction requirement as stated in the petition's decision would include the following groups:

- I. Claims 1-2, drawn in part to a eugenol hydroxylase, classified in class 435, subclass 189.
- II. Claims 1-2, drawn in part to coniferyl alcohol dehydrogenase, classified in class 435, subclass 190.
- III. Claims 1-2, drawn in part to coniferylaldehyde dehydrogenase, classified in class 435, subclass 191.
- IV. Claims 1-2, drawn in part to ferulic acid deacylase, classified in class 435, subclass 227.
- V. Claims 1-2, drawn in part to vanillin dehydrogenase, classified in class 435, subclass 191.
- VI. Claims 3-7, drawn in part to a polynucleotide encoding a eugenol hydroxylase, vectors and microorganisms comprising said polynucleotide, as well as a method of transformation of said microorganisms with said vectors, classified in class 536, subclass 23.2.
- VII. Claims 3-7, drawn in part to a polynucleotide encoding a coniferyl alcohol dehydrogenase, vectors and microorganisms comprising said polynucleotide, as well as a

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method of transformation of said microorganisms with said vectors, classified in class 536, subclass 23.2.

- VIII. Claims 3-7, drawn in part to a polynucleotide encoding a coniferylaldehyde dehydrogenase, vectors and microorganisms comprising said polynucleotide, as well as a method of transformation of said microorganisms with said vectors, classified in class 536, subclass 23.2.
- IX. Claims 3-7, drawn in part to a polynucleotide encoding a ferulic acid deacylase, vectors and microorganisms comprising said polynucleotide, as well as a method of transformation of said microorganisms with said vectors, classified in class 536, subclass 23.2.
- X. Claims 3-7, drawn in part to a polynucleotide encoding a vanillin dehydrogenase, vectors and microorganisms comprising said polynucleotide, as well as a method of transformation of said microorganisms with said vectors, classified in class 536, subclass 23.2.
- XI. Claims 8 and 9, drawn in part to a method of making coniferyl alcohol using a microorganism transformed with a nucleic acid encoding a eugenol hydroxylase, or a eugenol hydroxylase, classified in class 435, subclass 25.
- XII. Claims 8 and 10, drawn in part to a method of making coniferylaldehyde using a microorganism transformed with a nucleic acid encoding a coniferyl alcohol dehydrogenase, or a coniferyl alcohol dehydrogenase, classified in class 435, subclass 26.
- XIII. Claims 8 and 11, drawn in part to a method of making ferulic acid using a microorganism transformed with a nucleic acid encoding a coniferylaldehyde dehydrogenase, or a coniferylaldehyde dehydrogenase, classified in class 435, subclass 26.

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XIV. Claims 8 and 12, drawn in part to a method of making vanillin using a microorganism transformed with a nucleic acid encoding a ferulic acid deacylase, or a ferulic acid deacylase, classified in class 435, subclass 18.

XV. Claims 8 and 13, drawn in part to a method of making vanillic acid using a microorganism transformed with a nucleic acid encoding a vanillin dehydrogenase, or a vanillin dehydrogenase, classified in class 435, subclass 26.

It is noted however that the claims have been amended such that the subject matter of the claims have changed. Therefore, in accordance with the petition's decision and the subject matter encompassed by the claims as amended, claims 1-15 would be restricted as follows:

- I. Claims 1-2, drawn to a ferulic acid deacylase comprising SEQ ID NO: 30, classified in class 435, subclass 227.
- II. Claims 3-6, 9-12, 15, drawn to a polynucleotide encoding a ferulic acid deacylase comprising SEQ ID NO: 30, vectors and microorganisms comprising said polynucleotide, as well as a method of transformation of said microorganisms with said vectors, classified in class 536, subclass 23.2.
- III. Claims 7-8, 13 and 14, drawn in part to a method of making vanillin using a ferulic acid deacylase comprising SEQ ID NO: 30 with a microorganism transformed with a nucleic acid encoding the ferulic acid deacylase, or a ferulic acid deacylase, classified in class 435, subclass 18.

New Group I would correspond to old Group IV, new Group II would correspond to old Group IX, and new Group III would correspond to modified Group XIV. In view of Applicant's previous election, the elected new group is deemed to be new Group I (claims 1-2, drawn to a ferulic acid deacylase comprising SEQ ID NO: 30). Since new Group III is considered a method of use of the elected product, and the elected product is deemed allowable, claims 7-8, 13 and 14 are rejoined for

examination in accordance with MPEP 821.04. Thus, the restriction requirement between new Group I and III is hereby withdrawn.

New claim 14 is directed to new Group III and will be examined. New claim 15 is directed to new Group II and will not be examined. This application contains claims 3-6, 9-12, 15 drawn to an invention non-elected with traverse in a communication filed on 6/1/2004. A complete reply to the final rejection must include cancellation of non-elected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claims 1-2, 7-8, 13-14 are under consideration and are being examined herein.

Rejections and/or objections not reiterated from previous office actions are hereby withdrawn.

Claim Objections

1. Claims 8 and 14 are objected to as the claims refer to a non-elected invention, i.e. the microorganisms of claim 6". It is suggested the claims be amended to include the limitations relevant to the microorganism of claim 6 in the instant claims. For examination purposes, the claims will be interpreted as reciting "a microorganism transformed with a polynucleotide encoding the polypeptide of SEQ ID NO: 30". Appropriate correction is required.
2. Claim 8 is objected to due to the recitation of "expressing a ferulic acid dehydrogenase of claim 1". For clarity and consistency, it is suggested that the terms be amended to recite "expressing the ferulic acid deacylase of claim 1". Appropriate correction is required.
3. Claim 14 is objected to due to the recitation of "isolated DNA comprising SEQ ID NO: 29 which codes for an isolated ferulic acid deacylase ...and is part of a 9400 bp EcoR1...". It is suggested that the term be amended to recite "isolated DNA comprising SEQ ID NO: 29 which codes for an isolated ferulic acid deacylase ..., wherein said isolated DNA is part of a 9400 bp EcoR1..." to clearly indicate that it is

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the isolated DNA, and not the deacylase, which is part of the 9400 bp EcoR1 fragment. Appropriate correction is required.

Claim Rejections - 35 USC § 112, Second Paragraph

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claims 2 and 13 are indefinite in the recitation of “isolated ferulic acid deacylase is.... part of a 9400 bp EcoR1 fragment of Pseudomonas...” because it is unclear as to how a polypeptide (i.e. ferulic acid deacylase) can be part of a DNA fragment (i.e. 9400 bp EcoR1 fragment). For examination purposes, it will be assumed that the claims recite “isolated ferulic acid deacylase is encoded by a polynucleotide which is part of a 9400 bp EcoR1 fragment of Pseudomonas..”. Correction is required.

Claim Rejections - 35 USC § 112, first paragraph

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 2, 13-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The invention appears to employ a novel *Pseudomonas* strain, i.e. HR 199. Since the strain is essential to the claimed invention, it must be obtainable by a repeatable method set forth in the specification or otherwise be readily available to the public. While the claims recite a DSM number (corresponds to the German Collection of Microorganisms and Cell Cultures), it appears that this strain is not available from the DSMZ. The Examiner attempted to search for this strain in the DSMZ website but no such strain could be found. See printouts being forwarded to Applicants. The enablement requirements of 35 U.S.C. § 112 may be satisfied by a deposit of the recited strain. The specification does not disclose a repeatable process to obtain the strain and it is not apparent if the strain is readily available to the public. Accordingly, it is deemed that a deposit of this strain should have been made in accordance with 37 CFR 1.801-1.809.

Applicants are reminded that if a deposit is made under the terms of the Budapest Treaty, then an affidavit or declaration by applicants, or a statement by an attorney of record over his or her signature and registration number, stating that the specific strain has been deposited under the Budapest Treaty and that the strain will be available to the public under the conditions specified in 37 CFR 1.808, would satisfy the deposit requirement made herein.

If the deposit is not been made under the Budapest treaty, then in order to certify that the deposit meets the criteria set forth in 37 CFR 1.801-1.809, applicants may provide assurance or compliance by an affidavit or declaration, or by a statement by an attorney of record over his or her signature and registration number, showing that:

- a. during the pendency of this application, access to the invention will be afforded to the Commissioner upon request;
- b. upon granting of the patent the strain will be available to the public under the conditions specified in 37 CFR 1.808;
- c. the deposit will be maintained in a public repository for a period of 30 years or 5 years after the last request or for the effective life of the patent, whichever is longer; and
- d. the deposit will be replaced if it should ever become unviable.

If the strain is indeed publicly available and has a different accession number in DSMZ, Applicants are required to show evidence indicating that a change in accession number was made.

Claim Rejections - 35 USC § 102

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
10. Claim 1 was rejected under 35 U.S.C. 102(a) as being anticipated by Priefert et al. (J. Bacteriol 179(8):2595-2607, April 1997).
11. Claim 1 was rejected under 35 U.S.C. 102(b) as being anticipated by Jaeger et al. (Current Microbiology 6:333-336, 1981).
12. These rejections are hereby withdrawn in view of the amendment of claim 1, which is now directed to a polypeptide comprising SEQ ID NO: 30. Neither Priefert nor Jaeger teach or suggest the claimed polypeptide.

Double Patenting

13. Claim 1 was rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6524831.
14. This rejection is hereby withdrawn in view of the amendment of claim 1, which is now directed to a polypeptide comprising SEQ ID NO: 30.

Allowable Subject Matter

15. Claims 1 and 7 appear to be allowable over the prior art of record.
16. Claim 8 appears to be allowable over the prior art of record but it is objected to for the reasons set forth above.

Conclusion

17. Applicant's amendment of claims 2, 8, 13 and addition of claim 14 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

18. Certain papers related to this application may be submitted to Art Unit 1652 by facsimile transmission. The FAX number is (703) 872-9306. The faxing of such papers must conform with the notices published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 CFR 1.6(d)). NOTE: If Applicant submits a paper by FAX, the original copy should be retained by Applicant or Applicant's representative. **NO DUPLICATE COPIES SHOULD BE SUBMITTED**, so as to avoid the processing of duplicate papers in the Office.

19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PMR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delia M. Ramirez whose telephone number is (571) 272-0938. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Ponnathapura Achutamurthy can be reached on (571) 272-0928. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Delia M. Ramirez, Ph.D.
Patent Examiner
Art Unit 1652

DR
February 17, 2005


REBECCA E. PROUTY
PRIMARY EXAMINER
GROUP 1652
1652

Search Results**DSMZ****DSM 7063 was not found**[Next Search](#)[Microorganisms](#)[Plant Cell Lines](#)[Plant Viruses](#)[Human and Animal Cell Lines](#)

DSMZ - List of Microbial Species: *Pseudomonas* sp. (Bacteria)**DSMZ**

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Name	<i>Pseudomonas</i> sp.
Strains	<u>1085</u> , <u>1110</u> , <u>1192</u> , <u>1193</u> , <u>1194</u> , <u>1195</u> , <u>1196</u> , <u>1197</u> , <u>1198</u> , <u>1199</u> , <u>1634</u> , <u>1650</u> , <u>1749</u> , <u>2583</u> , <u>3602</u> , <u>3933</u> , <u>3934</u> , <u>3935</u> , <u>6412</u> , <u>6426</u> , <u>6537</u> , <u>6538</u> , <u>6611</u> , <u>6765</u> , <u>6837</u> , <u>6978</u> , <u>7139</u> , <u>7152</u> , <u>7220</u> , <u>7322</u> , <u>8544</u> , <u>8897</u> , <u>8899</u> , <u>9128</u> , <u>9246</u> , <u>9751</u> , <u>9959</u> , <u>10315</u> , <u>11389</u> , <u>11390</u> , <u>11531</u> , <u>11532</u> , <u>11533</u> , <u>11534</u> , <u>11535</u> , <u>11562</u> , <u>11563</u> , <u>11564</u> , <u>11565</u> , <u>11566</u> , <u>11567</u> , <u>11568</u> , <u>11569</u> , <u>11570</u> , <u>11591</u> , <u>11634</u> , <u>11735</u> , <u>12019</u> , <u>12280</u> , <u>12800</u> , <u>12877</u> , <u>13957</u> , <u>14938</u> , <u>46290</u> , <u>50117</u> , <u>50401</u> , <u>50421</u> , <u>50429</u> , listed under other name: <u>433</u> , <u>1084</u> , <u>1227</u> , <u>1339</u> , <u>6014</u> , <u>6342</u> , <u>6343</u> , <u>6383</u> , <u>6411</u> , <u>6431</u> , <u>6449</u> , <u>6506</u> , <u>6508</u> , <u>6613</u> , <u>6708</u> , <u>6818</u> , <u>6838</u> , <u>6898</u> , <u>6984</u> , <u>7116</u> , <u>7135</u> , <u>7300</u> , <u>7346</u> , <u>8370</u> , <u>8606</u> , <u>8671</u> , <u>8910</u> , <u>10368</u> , <u>11363</u> , <u>11852</u> , <u>30002</u>

DSMZ**Microorganisms**